

## CIVIL AERONAUTICS JOURNAL



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ISSUED TWICE MONTHLY BY THE CIVIL AERONAUTICS AUTHORITY

VOLUME 2

WASHINGTON, JANUARY 15, 1941

NUMBER 2

C. A. B. EXAMINER REPORTS  
ON ALASKAN AIRLINESDirector Stough of Economic Bureau Recommends  
Approval of 23 Applications, Would Deny 13

An Examiner's report, covering an extensive survey of conditions in Alaska and recommendations for dealing with applications for certificates of convenience and necessity by the various airlines there, has been made public by the Civil Aeronautics Board. The report does not include Pacific Alaska Airways, subsidiary of Pan American Airways, Inc., which now operates from Seattle to Ketchikan, Juneau, Fairbanks, Nome, and Bethel, since this case already has been heard separately.

The survey, made by Raymond W. Stough, Director of the Board's Economic Bureau, who also acted as Examiner, pointed out the vital importance of air transportation in Alaskan development. In an area close to 600,000 square miles in extent, producing a trade with the United States proper in 1939 of \$116,899,778 with a balance of about \$25,000,000 in Alaska's favor, there are approximately 60,000 persons, about half of them white.

The report stated that although a large amount of traffic moves over the Alaska Railroad, operated by the Interior Department between the coastal port, Seward, and Fairbanks, and in summer over the Richardson Highway between Valdez and Fairbanks and by way of slow and not too frequent river boats, air is the only means of transportation elsewhere. Long-distance dog-team travel is at an end, since the planes can cover in 8 minutes a day's journey by sled. Flying has increased safety greatly and has reduced rates materially, a trip by sled from Fairbanks to Nome costing \$500, as against the plane fare of \$78, and taking 30 days as against 4 hours.

The report pointed out that the investment of the air carriers is now about \$1,000,000 and annual revenues are in excess of that figure. Air express contributes an unusually high proportion of total traffic, cases of canned goods and other food products, carcasses of slaughtered reindeer and big

game, gold, platinum, furs, light household goods, parts of machinery, fuel oil and gasoline in drums constituting regular items. Live animals and dynamite also are carried. Mail of all classes is handled on a number of different bases, the greatest volume moving over contract star routes.

Hearings on applications from 39 carriers were held in Alaska by the Examiner and after expiration of the time fixed for filing of exceptions to the report by the parties to the proceeding, the cases will stand submitted for decision by the Board. Under section 801 of the Civil Aeronautics Act, the issuance of certificates for this service in the Territory is subject to approval by the President.

Great importance is attached by the Examiner to the need for control of present alleged cutthroat competition among the carriers operating, through establishment of designated routes and definite scales of passenger and freight rates. Due to the extremely difficult flying conditions and the need for service to scattered, distant settlements whose very life depends on the planes, the rules for procedure that apply to air transportation in the United States must in many instances be modified to fit local situations.

According to the report, recent national defense and other governmental projects have expanded business in Alaska greatly and the Administrator of Civil Aeronautics now has under way extensive work, long needed, which includes installing of radio-beam facilities, weather-reporting stations and landing fields.

The carriers making application for certificates are: Ackerman Air Service, Cordova Air Service, Lyle Airways, Reeve Airways, Bristol Bay Air Service, Inc., Nat Browne Flying Service, Jack Carr Service, Christensen Air Service, Dillingham Air Service, Larson-Alaskan Distributing Co., Leo Moore Flying Service, Peck & Rice Airways, Ray Petersen Flying Service, Star Air

Ryan Predicts  
100,000 Pilots  
by Mid-1941

By the end of the present school year, the United States will have 100,000 civilian pilots as against 21,000 licensed pilots in the entire Nation 2 years ago. Oswald Ryan, member of the Civil Aeronautics Board, declared recently in an address to the Harvard Club of Washington.

Discussing the problems of national defense, Mr. Ryan reviewed the activities of the Civil Aeronautics Authority during the past 2 years as they affected national defense, and urged that from this standpoint, we must guard against a lack of airports becoming a bottleneck in our air defense.

Excerpts from Mr. Ryan's  
Address

"The problem of national defense has confronted the American people in former critical periods of history but never before has the defense problem presented

(See 100,000 PILOTS, page 22)



ISSUED TWICE MONTHLY BY THE CIVIL AERONAUTICS AUTHORITY

VOL. 2 JANUARY 15, 1941 No. 2

Published with the approval of the  
Director of the Bureau of the Budget

Issued on the 1st and 15th of each month.  
Subscription \$1 (foreign \$1.50) per year.  
Single copies 5 cents. Sold by the Superintendent of Documents, U. S. Government  
Printing Office, Washington, D. C.

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## 100,000 Pilots

(Continued from page 21)

more serious difficulties. The explanation of this lies in the formidable character of the challenge which comes out of the world situation and in the suddenness of its development. Every American should carefully read and ponder every word of that report which Mr. Knudsen of the Defense Commission gave to our Nation on the present status of our defense program.

"But while the problem of our national defense is more serious than any defense problem with which he have previously been confronted, there is greater unity of opinion today on the part of our people than there has ever been before. Compare the state of popular opinion in the United States today with that which prevailed in 1914 to 1917 when decisive forces moved men like Theodore Roosevelt to earnest appeals for national unity. On former occasions when preparedness became an issue there has always been a considerable body of opinion vigorously opposed to a program of preparedness. That view persisted in spite of the fact that unpreparedness on the part of a peace-loving nation everywhere and always had been a provocation to war instead of an assurance of peace. Our own history has contributed to this truth. At the beginning of our national life George Washington declared that a reputation for weakness would lead to war and that the way to preserve peace was to be prepared for war. Yet in spite of the great influence of the father of his country, within a short time after his death, the Nation's defenses were so neglected that an army from Europe landed upon our Atlantic coast, burned the national capital and sent the President of the United States into exile.

"But we do not face any such prospect today. For the Nation today recognizes the wisdom in Washington's advice on preparedness. We Americans are a peace-loving people, but we have never stood for peace at any price. We remember today that this Nation was born in battle, and that in battle it may ultimately have to be preserved.

"In the Civilian Pilot Training Program which was set up 2 years ago by the Civil Aeronautics Authority, we have a Nation-wide training establishment for the mass training of primary students. This vast training plant with its units located in more than 700 colleges and universities and more than 200 noncollege centers, is a going concern, fully equipped and adequate for the tremendous task of primary training which lies before us in the defense program. And as a result of this program we are just 18 months ahead of where we would have been were we starting at "scratch" today. We will have 100,000 civilian pilots by the end of the present academic year as against the 21,000 licensed pilots which we had in the entire United States 2 years ago.

"I now come to another essential element in our national air-defense program. Like ships that ply the ocean, airplanes must make contact at last with solid earth and it is only by virtue of airport facilities that the aircraft themselves can exist. No defense program therefore can overlook the necessity for a well-planned national system of airports, not only to make possible the swift movement of large groups of military aircraft across the country, but to permit their concentration in a limited geographical area for intensive military operation.

"From the national defense standpoint we must guard against a lack of airports becoming a bottleneck in our air defense.

"We are on the way to the achievement of an adequate airport system for the United States. Congress recently has made an appropriation of \$40,000,000 to the Civil Aeronautics Authority to be spent upon those airports which are most urgently needed for the national defense, and it is safe to say that this is just the beginning of a comprehensive program."

## Alaskan Airlines

(Continued from page 21)

Lines, Wm. M. Welsh, Woodley Airways, Barr Air Transport, Lon Brennan Air Service, Jim Dodson Air Service, Harold Gillam, Lavery Airways, Lynn Air Service, Pollack Flying Service, Schutte Air Service, Trans-Alaska, Inc., Ferguson Airways, Inc., Mirow Air Service, Munz Air Service, Northern Cross, Inc., Wien Alaska Airlines, Inc., Aircraft Charter Service, Alaska Air Transport, Inc., and Marine Airways (merged), Ellis Air Transport, Petersburg Air Service, Rinehart Seaplane Service, and White Pass Airways, Inc.

The Examiner recommended that 23 of these applications be approved by the Board, 13 denied, 1 granted exemption from requirement to have certificate, and 2 dismissed—the first for lack of certainty as to the identity of the applicant, the second at the applicant's request.

## Correction

Two of the designations in the story on airline operations which appeared on page 511 of the CIVIL AERONAUTICS JOURNAL, volume 1, No. 24, dated December 15, 1940, were incorrect. In the third paragraph, the figures shown are for revenue miles, not revenue-passenger miles, and in the fourth paragraph, revenue hours should be revenue miles. The correct total for gasoline consumed is 33,220,246 gallons.

# Aero Industry Plant Expansion To Triple Space

The aircraft industry is meeting the need for thousands of military airplanes with a history-making program of plant expansion. Against a background of men and steel at a new factory building, the chart below, prepared by the Aeronautical Chamber of Commerce of America, shows how airplane, engine, and propeller manufacturers of the Nation have increased the size of their factories since the outbreak of the war in Europe and how, by the time present expansion programs are completed, their total working area will have grown to more than 33,000,000 square feet.



## Manufacturing and Production

### Employees May Be Named as Inspection Representatives

Donald H. Connolly, Administrator of Civil Aeronautics, has ordered, effective December 17, that the Director of the Bureau of Safety Regulation may designate employees of any aircraft manufacturer producing military aircraft as Inspection Representatives. The full text of the Administrator's order follows:

Acting pursuant to the authority vested in me by sections 308, 501 (c) and 603 (c) of the Civil Aeronautics Act of 1938, as amended, and finding that this action is required to best effectuate the policies declared in, and the purposes of, said Act.

#### IT IS ORDERED THAT:

The Director, Bureau of Safety Regulation, is authorized to designate employees of any aircraft manufacturer producing military aircraft for export, who are qualified for the purpose, as Inspection Representatives. Any such designation may be terminated at the discretion of the Director, Bureau of Safety Regulation. Such Inspection Representatives shall be authorized only to inspect, and to issue and sign aircraft registration and airworthiness certificates for experimental purposes and the applicable aircraft operation records for, military aircraft manufactured for export.

All orders, instructions, memoranda, and office notices inconsistent herewith are hereby repealed.

This Order shall become effective 12:01 A. M., E. S. T. the 17th day of December 1940.

### NEW TYPE APPROVALS

(Approval numbers and dates of assignment in parenthesis)

#### Type Certificates

##### Aircraft

Phillips, CT-2, two-place open land biplane. Engine, Phillips 333. (731, 12-7-40.)

##### Engines

Aircooled, Franklin 6AC-298, 6 cylinder horizontal opposed air cooled, 130 horsepower at 2,550 revolutions per minute at sea level pressure altitude. (225, 12-10-40.)

##### Appliances

Heath, skis, model 655. Approved static load per ski 655 pounds. (128, 12-7-40.)

### NEW MODELS ADDED TO OLD TYPE APPROVALS

(Approval numbers and dates of approval of new models in parenthesis)

##### Propellers

Sensenich, 86M, wood, 6-foot 2-inch diameter, 4 foot-6-inch pitch, 130 horsepower, 2,175 revolutions per minute. (Approved type certificate No. 586, 12-12-40.)

##### Appliances

Shinn, low pressure wheels, models 6C5YB and 6C5YFB, 6.00-6, aluminum alloy cast. Approved static load per wheel 1,150 pounds. (Type certificate No. 63, 12-13-40.)

# Private Flying

## Civilian Pilot Training Program Adds Cross-Country and Instrument Courses

### Will Give Training in More Advanced Phases To Qualified Graduates of Other Courses

Two new courses, one in cross-country flying and the other in instrument flying, have been added to the various pilot training, instructor training, and pilot refresher courses now offered under the 1940-1941 Civilian Pilot Training Program. The object of the new courses is to give training in these two more advanced phases of flying to certain especially qualified graduates of other courses.

A limited number of flight scholarships for the cross-country training will be awarded to outstanding C. P. T. graduates of (1) the private course, (2) the secondary course, and (3) the student instructor course. Successful completion of this course will make the trainee eligible for the new instrument course or, if he prefers, the secondary instructor refresher course.

The cross-country course will consist of approximately 40 hours of flight training and approximately 40 hours of ground instruction. It will include day and night cross-country flying, with instruction and practice in the use of all required aids to air navigation and the preparation of records required in connection with such flying. Flight training will be given in four-place cabin airplanes of 245 horsepower or more, suitably equipped with such instruments as are necessary to insure safety in the conduct of the training.

The instrument course, a prerequisite for which is the successful completion of the cross-country course, will consist of approximately 40 hours of instrument flight training. It will include instruction and practice in flying under the hood and instruction in a Link Trainer.

Selection of trainees and assignment to training centers will be undertaken as soon as final details for the courses are worked out, with actual training probably getting under way next month.

### C. P. T. P. Courses' Names Changed

Changes in the names of courses and in three cases, in the amount of flying time offered, have been announced for the Civilian Pilot Training Program. The changes are as follows:

The apprentice instructor course has been changed to student instructor course; the primary instructor course has been changed to instructor refresher

course; the advanced instructor refresher course has been changed to secondary instructor refresher course; and the commercial pilot refresher course has been changed to commercial refresher course.

The instructor refresher course now offers 20 hours minimum to 25 hours of flight training, in place of the 10 to 15 hours formerly offered; the secondary instructor refresher course now offers 25 hours minimum to 30 hours of flight training in place of the 18 to 25 hours formerly offered; and the commercial refresher course now offers 20 hours minimum to 25 hours of flight training in place of the 15 to 25 hours formerly offered. A complete description of the requirements for each of the C. P. T. P. courses was carried in tabular form on page 507 of the CIVIL AERONAUTICS JOURNAL, Volume 1, No. 24, dated December 15, 1940.

## UNDERWRITERS DOUBLE INSURANCE REPAYMENT

Accident insurance premiums to cover students in the Civilian Pilot Training program have been reduced again, in effect, because, effective January 1, 1941, the amount of hospitalization and medical reimbursement has been doubled by the underwriters with no increase in the premiums. Col. Donald H. Connolly, Administrator of Civil Aeronautics, has announced.

The New Year's "present" from the insurance companies is an increase to \$1,000 of the reimbursement for hospitalization and medical care carried by all student pilots taking the C. A. A. preliminary course. The amount formerly was \$500, and the increase will not increase the premium, which costs \$9 for the course, including both the \$1,000 for injury and \$3,000 for death.

This action, Colonel Connolly said, represents the fourth voluntary concession by the underwriters during the less than 2-year existence of the program, because of its unprecedented safety record.

Previous to the program, \$3,000 coverage cost a student pilot \$35. The first rate for the C. A. A. controlled course was \$20. This was cut to \$14 in the autumn of 1939, to \$10 last June and to

\$9 in September. Now the amount of injury coverage is doubled without additional cost.

More than 22,000 preliminary students and 1,000 secondary students have completed the courses, while in the current October-to-February course 15,000 more preliminary and 3,000 more secondary students are in the final phase of their training, with a total of 15 student fatalities for the entire 2 years, Colonel Connolly said.

The increase in amount of hospital and medical care will apply to premiums on other types of C. A. A. training as well as the preliminary course, the Administrator explained.

This increase is especially significant in the two courses for instructors, because these courses have been expanded; and yet the premiums remain the same. Primary instructors who formerly took from 10 to 15 hours of "brush-up" flying now are given from 20 to 25 hours, while secondary instructors now get 25 to 30 hours instead of the former 18 to 25 hours. Throughout the entire life of the training program, there have been 11 instructor fatalities.

Premium for the secondary students' course is \$12, for the primary instructor refresher is \$6.50 and the secondary instructor refresher is \$7.50.

## All C. P. T. P. Texts Now Available

Listed below are the Civil Aeronautics Bulletins designed for use in the Civilian Pilot Training Program. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C.

FLIGHT INSTRUCTOR'S MANUAL (No. 5)—137 pages, illustrated. Price, 30 cents.

DIGEST OF CIVIL AIR REGULATIONS FOR PILOTS (No. 22)—71 pages, illustrated. Price, 20 cents.

CIVIL PILOT TRAINING MANUAL (No. 23)—257 pages, illustrated. Price, 50 cents.

PRACTICAL AIR NAVIGATION (No. 24)—239 pages, illustrated. Price, \$1.

METEOROLOGY FOR PILOTS (No. 25)—167 pages, illustrated. Price, 75 cents.

AERODYNAMICS FOR PILOTS (No. 26)—158 pages, illustrated. Price, 30 cents.

PILOTS' AIRPLANE MANUAL (No. 27)—150 pages, illustrated. Price, 30 cents.

PILOTS' POWERPLANT MANUAL (No. 28)—392 pages, illustrated. Price, 75 cents.

PILOTS' RADIO MANUAL (No. 29)—98 pages, illustrated. Price, 25 cents.

GROUND INSTRUCTOR'S MANUAL (No. 30)—51 pages, illustrated. Price, 15 cents.



# New York Operator Requires Safety Essays

To impress upon Civilian Pilot Training Program students the necessity of observing the common sense rules of flying, Matthews & Rappaport, flight operators at Roosevelt Field, N. Y., require trainees "to put their mistakes on paper" as a means of maintaining a good safety record.

Reprinted below is the full text of one such essay, written by S. B. Perkins, Jr., primary trainee at the College of the City of New York. Copies of this letter have been sent to coordinators and flight operators in the C. P. T. P. with the recommendation that they adopt "a similar system to make every flight instructor and trainee more safety conscious in these fast-moving programs.

## Negligence on Three Hundred and Sixty Degree Landings

"A major portion of aviation accidents could be and should be avoided if the pilot were to exercise fundamental precautions in every instance. Among the basic common-sense safety rules is the making certain of the position of close-by air traffic. Over a field, especially one on which instruction on a large scale takes place, there will probably be numerous aircraft circling into position for landing maneuvers. Since it is difficult to see in all directions, it is important to consider the possible positions of planes in front, behind, beneath and above. The 'above' was particularly emphasized because of a haphazard move I made on the afternoon of November 30, 1940. A plane, circling above for a spiral had completed one and one-half full turns and was gliding into the spot above and slightly behind the spot I was using as reference to a 360° landing. Reports from the ground stated that the two planes missed by an uncomfortable margin. The pilots of both planes must be on the lookout for similar situations. Fortunately, the poor pilot I had so unceremoniously cut off was thereby avoiding a collision. The minor results of such negligence are psychologically, although not actually, as important as the major material effects. The spiraling pilot must regain his altitude and exercise unduly his swearing capacity.

"Everyone knows how ugly an airplane collision can be. A tangled mass of body and plane is no fun to unravel. Parachuting becomes an impossibility if the altitude at which the negligence occurs is too low. Death and disaster are the inevitable results. The danger of aircraft accidents extends further than to the pilots alone. The falling aircraft is a menace in itself. There is no limitation to the seriousness of a midair collision. Through a stretch of the imagination all sorts of disastrous pictures may be painted. Property dam-

age as well as personal injury will undoubtedly be sustained and of an extensive nature if the collision occurs over a crowded area. The adage 'look before you leap' should be changed to 'look, and you won't have to leap.'

"Having discussed the material damage due to negligence, it might be well to discuss also the limits of psychologi-

## Designation of Medical Examiners

During the month of September 1940 the following-named physicians officially were authorized to make physical examinations for the Administration.

ALABAMA. Dr. Vincent Jones Gragg, Central Alabama Hospital, Clanton.  
ARIZONA. Dr. Lyle A. Condehl, 218 Central Avenue, Safford.  
ARKANSAS. Dr. William Jackson Butt, First National Bank Building, Fayetteville.  
NORTH CAROLINA. Dr. Alexander Wingate Simmons, 410 Webb Avenue, Burlington.  
UTAH. Dr. Wilford J. Reichman, 14 North Main Street, St. George.  
WASHINGTON. Dr. Paul H. Beppler, Realty Building, Pullman.

### Airline Medical Examiner

Dr. John L. Hillhouse, 310 Medical Arts Building, Birmingham, Ala.

The following named physician has changed his address during the month, his new address being as follows:

Dr. Francis M. Givley, 111 West Drinker Street, Dunmore, Pa.; formerly Leated at Scranton, Pa.

The following named physicians no longer are making examinations for the Administration:

Dr. Fount Richardson, Fayetteville, Ark.  
Dr. F. W. Briggs, Havre, Mont.  
Dr. George W. Williams, Trenton, N. J.  
Dr. Carroll C. Linton, Burlington, N. C.  
Dr. William E. Brackett, Hendersonville, N. C.  
Dr. Warren A. Harrison, Bristol, Tenn.  
Dr. Lorraine E. Sheffield, St. Johnsbury, Vt.  
Dr. Jasper A. Smith, Pullman, Wash.  
Dr. Emory W. DeKay, Laramie, Wyo.  
Dr. Doyle Joslin, Rock Springs, Wyo.

cal damage as described by habit. A student pilot is particularly impressionable. Anything he learns will influence his later flying. The things he does not learn are apt to accumulate into bad flying habits. For example, if a pilot in his student stage were to complete his instruction, gain his license, and still possess the bad habit of air negligence in regard to other aircraft, his future flying safety will be menaced. The habit will mark him as a hazard to the safety of others. These defects must be caught by the instructor and the job is no cinch. Habits, such as used in the illustration above, are not always readily discernible and may be overlooked if the pilot does not happen to have any concrete example as proof of his error. Luckily this habit of failing to look around was

brought to my attention concretely enough by a narrow escape involving no damage or injury and emphasized properly by the instructor.

"The following is a list of *do's* and *don'ts* for planes beginning a landing maneuver:

"(1) *Do* make certain no other plane will interfere throughout the pattern of your maneuver.

"(2) *Do* give consideration to pilots executing a maneuver more difficult and painstaking than yours.

"(3) *Do* give consideration to all pilots.

"(4) *Do* be prepared for any possibility no matter how remote, of collision.

"(5) *Don't* rush into your landing pattern if there is a plane immediately ahead of you which *might* interfere.

"(6) *Don't* rely to any measurable extent on your own right of way.

"The adoption of those rules should decrease the chance of air accidents and increase the pilot's standing as a good and careful navigator.

"Because I was guilty of the negligence mentioned, the above essay was written and proves that any future accident of this type will not reflect discredit on my instructor who dutifully uses this method for impressing on me the foolhardiness of making a 360° landing without first looking around."

"Respectfully submitted.

"(S. BENHAM PERKINS, JR.)"

## C. P. T. P. To Train 20 Latin Americans

Civilian Pilot Training Courses of the C. A. A. will be given early in 1941 to 20 South American college students—one from each of the Pan-American republics, if possible—Col. Donald H. Connolly, C. A. A. Administrator, said Tuesday.

The youthful South Americans will be given the training with \$20,000 from a special Presidential appropriation for Latin American cooperation, made available to the C. A. A. by the State Department, Colonel Connolly said.

The students will be selected from Latin American nationals now attending colleges in the United States, he explained, and inquiries regarding location of such nationals already have been made of more than 700 colleges now conducting pilot training units. This miniature "census" will be completed late in January, when selections from the lists probably will be made by the diplomatic representatives of the Pan-American countries.

The 20 students will be given the regular C. A. A. preliminary course of 72 hours ground school and 35 to 45 hours flight training on light airplanes. Then the top-ranking 14 will be continued in the secondary course, which involves 126 hours additional ground school and 40 to 50 hours additional flight training, this time on heavier (See LATIN-AMERICAN PROGRAM, p. 27)

## Air Safety

### Board Discusses Collision Danger

#### Bulletin Asks Series of Questions on Air Collisions; More Reports on Individual Private Flying Accidents

In a recent bulletin on air safety, the Civil Aeronautics Board turned to the problem of collisions and asked a series of questions on this subject, the answers to most of which are obvious. In one or two instances, the Board complemented its question with succinct comment.

Following is the full text of the bulletin, as well as more in the series of reports on individual private flying accidents which are being released by the Board:

#### "ARE YOU COLLISION CONSCIOUS?"

"Do you circle the field unless cleared in by the control tower?"

"Do you try to predetermine which way to circle the field before you arrive (some fields require right turns under certain wind conditions, usually to avoid going over a town or to avoid traffic at an adjacent airport)?"

"Do you use a reasonable circling radius or a wide one which lends uncertainty as to your landing intentions? (But remember that large airplanes necessarily must fly a larger radius than a small one.)"

"Do you make a sharp turn near the field (which, in a high-winged ship, blankets your vision of the airport and of other aircraft) before your final approach? (Rules say you must maintain a straight course of at least 1,000 feet before crossing the airport boundary.)"

"Do you waste unnecessary time to get down at a crowded airport?"

"Do you delay traffic by squatting on the end of the runway while others are waiting for you to take off?"

"Do you expect the other fellow to be more alert than you, or do you rely on your own vigilance to avert a collision in the air?"

"Do you practice the courtesy of the air which requires you to give way to larger, less maneuverable aircraft?"

#### PILOT CRASHES AFTER STALLING IN STEEP TURN

Failure to recover from a spin after stalling at an altitude of about 800 feet

near Pensacola, Fla., on June 21, caused the crash in which private pilot Bruce G. Bingham and his passenger, Flora E. McVoy, were injured.

Pilot Bingham, with his passenger, took off from the Foley, Ala., Airport and flew to Pensacola, a distance of about 30 miles. Then he continued to approximately 3 miles east of the city, where he turned and flew over the congested area of Pensacola and out over Pensacola Bay. A short distance offshore, he attempted a steep turn and the aircraft stalled and fell into a spin which continued until it struck the water and was demolished.

Subsequent investigation revealed that the pilot received his dual flight instruction and his solo flight practice in an aircraft powered with a 50-horsepower engine while the plane in which he crashed, a Piper J-3, was powered with a 40-horsepower engine. Further revealed was the statement of the pilot that his efforts to recover from the spin did not include the application of opposite rudder.

*The probable cause.*—Pilot stalled the aircraft while executing a steep turn and failed to effect recovery from the resulting spin.

*The contributing factor.*—Inexperience of the pilot.

#### TWO KILLED AS PLANE RAMS TREE ON TAKE-OFF

Failure of private pilot Herbert J. Sargent to avoid a known obstruction 60 feet high resulted in his death and that of his passenger, Miss Dorothy Crabtree, near Wurtsboro, N. Y., on May 30.

Sargent had taken off in a northeasterly direction from Wurtsboro Airport, directing his take-off path so as to avoid flying over three men who were working on a glider-launching winch at one end of the field. The aircraft struck the top of a tree situated about 78 feet beyond the airport boundary and fell to the ground in an inverted position.

*Probable cause.*—Failure of the pilot to avoid a known obstruction following a take-off.

#### ANOTHER LOW ALTITUDE STALL FATALITY

Loss of speed while flying at low altitude brought a crash and serious injuries to private pilot John Melnick and resulted in the death of his passenger, Mrs. Joyce Stuart, at Whitehurst Field, Norfolk, on May 28.

Melnick, flying a Piper J-2, had taken off from Whitehurst Field with a passenger on a local pleasure flight,

Shortly after take-off, the aircraft was seen approaching the field from the northwest at an altitude of approximately 75 feet. According to a witness, the passenger waved as the aircraft passed over the field in level flight. A moment later the plane's nose dropped and it dived to the ground. Subsequent investigation failed to indicate that either power plant or structural failure had occurred prior to the crash.

*Probable cause.*—Failure of the pilot to maintain flying speed while flying at low altitude.

#### TWO KILLED WHEN PLANE STALLS

A steep climbing turn at low altitude, during which the aircraft stalled, resulted in fatal injuries to Laurence W. LeMieux, pilot, and Jesse C. Dorser, co-pilot, in a private plane accident near Menominee, Mich., about noon on June 5. LeMieux held a student pilot's license and had 65 hours, and Dorser held a private license.

Pilot LeMieux was accompanied by Pilot Jesse C. Dorser when he took off from the Menominee County, Mich., airport on a local flight in his personally-owned aircraft which was equipped with fully-functioning dual controls. The aircraft was an Arrow F, with an 82 h. p. V-8 engine. It had been pre-arranged that pilot LeMieux would hand controls to pilot Dorser that he might acquaint himself with the flight characteristics of this particular aircraft before flying it cross-country to Des Moines, Iowa, where he was planning to dispose of it.

A normal take-off was made and the aircraft was observed to fly in the vicinity of the airport for about 10 minutes before it came over the southwest corner of the airport at an estimated altitude of 500 feet. The aircraft then was observed to enter a steep left turn in a nose high attitude which progressively steepened as the turn continued. The aircraft stalled and fell off into a left spin which continued until the aircraft struck the ground on its nose in a nearly vertical attitude. The aircraft was demolished. Both occupants received fatal injuries.

Subsequent investigation of the wreckage did not disclose that any structural or control failure had occurred prior to the impact.

*The probable cause.*—Pilot stalled the aircraft during a steep climbing turn at low altitude.

*Comment.*—A steep climbing turn following take-off is considered dangerous practice.

#### GLIDER WINGS COLLAPSE—PILOT KILLED

Both wings collapsed on a home-made glider shortly after take-off near High Cliff, Wis., on March 31, causing a crash which was fatal to Pilot Harvey Blue, Jr.

Blue had been launched from the end of an 1,800-foot rope, attached to the rear wheel of an automobile in a winch attachment. The pilot had released the tow line at an altitude of approximately 400 feet and immediately thereafter both wings had collapsed, dropping the aircraft to the ground on its nose. Subsequent investigation showed that the pilot had assisted in building the glider approximately 9 years before.

*The probable cause.*—Structural failure of wings following take-off.

*Contributing factor.*—Faulty structural design.

## TWO KILLED AS PILOT LOSES CONTROL ON COYOTE HUNT

Failure to maintain control of his aircraft, a Taylorcraft BL-65, while flying at low altitude on a coyote hunt caused an accident fatal to private pilot William G. Bivens and his father, Julian L. Bivens near Amarillo, Tex., on May 23.

The pilot and passenger, before taking off from Amarillo, about 3:30 p.m., had expressed an intention of hunting coyotes while en route to their ranch 100 miles distant. The plane was not equipped for night flying so when they did not return by nightfall a searching party was organized. Early next morning the party found the plane's wreckage in a rolling pasture about 12 miles north of Amarillo.

Subsequent investigation showed no evidence that either power plant or structural failure had occurred prior to the crash. However, inspection of the wreckage indicated the aircraft struck the ground on its right wing tip while in a steep diving attitude and while making a slight turn to the right.

*Probable cause.*—Failure of the pilot to maintain control of the aircraft while flying at low altitude.

## CRASH RESULTS AS PILOT MISTAKES GROUND FOG FOR OVERCAST

Near Gallup, N. Mex., at about 12:30 p. m., on January 2, Leslie R. George, an uncertificated pilot with no recorded hours flown, while flying a Waco OXE, met with an accident which resulted in his serious injury.

George was flying cross-country from Blue Water to Gallup, N. Mex. Upon nearing his destination, the pilot attempted to descend through a break in the overcast over which he was flying. This break closed in during his descent, however, and he lost control of the aircraft, which fell into a spin that continued until it struck the ground and was demolished. The pilot sustained serious injuries. Subsequent investigation disclosed that the overcast which the pilot observed was a dense ground fog.

*The probable cause.*—Action of pilot in attempting to descend through overcast without instrument-flight experience.

*Contributing factor.*—Inexperience of pilot.

# NOVEMBER AIR FATALITIES UNDER NOVEMBER LAST YEAR

## Total Lower Despite Fatal Airline Accident and Increase in Active Pilot Certificates

Despite the occurrence of a fatal airline accident and despite the fact that more pilot certificates were active than ever before, fewer fatal accidents occurred in civil aviation in the United States during November 1940 than in any recent month, according to the monthly civil aviation statement released by the Civil Aeronautics Board.

There were 114,745 persons holding the various types of certificates last month, which means that 53,267 more people were flying than in the same month in 1939. And in air-carrier operations scheduled airlines flew almost 10,000,000 miles and transported nearly 300,000 passengers.

The Board's statement shows that during November 1940 a total of 13 fatal accidents occurred in all types of civil

aviation, compared with 19 in November 1939 and 23 in October 1940. One of these was the airline accident which occurred near Centerville, Utah, on November 4, 1940. Charter flying and other nonscheduled commercial operations were completely accident-free.

In making its monthly summary of civil aviation accidents the Board issued tables showing the causes of last month's fatal nonair-carrier accidents and comparing November with the month preceding and with October and November 1939.

From the Board's tabulation it will be seen that fatal nonair-carrier accidents dropped 48 percent below the figure recorded for October 1940. Three of the 13 fatal accidents during November occurred in the Civilian Pilot Training Program.

## Non-Air Carrier Accident Causes

	Instructional		Pleasure		Commercial		Undetermined	Total
	Solo	Dual	Local	Cross-country	Local	Cross-country		
Stalled and spun in.....	1	1	1	1				4
Collision with other aircraft.....		3						3
Inexperienced pilot on instruments in bad weather.....				1				1
No details.....			12	1			1	4
Total.....								12

<sup>1</sup> 2 glider accidents.

## Civil Aviation Fatal Accidents

(Monthly comparative figures)

	November	October
1940.....	13	23
1939.....	19	15

## Latin-American Program

(Continued from page 25)

aircraft of the type used for primary military training.

The plan is introductory and somewhat experimental in character, Colonel Connolly explained—a small start to see whether such work will prove helpful in the development or extension of pilot training courses in the countries to the south. He said several of these countries already have launched substantial training programs, and South American aviation officials have ex-

pressed a very active interest in methods and results in this country.

Heretofore, the Civilian Pilot Training Program has been limited to United States citizens. In 18 months it has trained more than 22,000 youths between 18 and 26 up to the grade of private pilot, and given the secondary course to more than 1,000. Fifteen thousand more beginners have been flying since September and will finish in February, when another 15,000 will begin the course, finishing in June. During the remainder of the school year, also, 8,000 secondary students who already have taken the beginning course will be given the secondary training.

# Air Transportation

## BOARD ALLOWS T. W. A. TO BUY MARQUETTE

The Civil Aeronautics Board has approved under sections 408 (b), 412 and 401 (i) of the Civil Aeronautics Act, the acquisition by Transcontinental & Western Air, Inc., of all of the issued and outstanding capital stock of Marquette Airlines, Inc., and of the assets and business of Marquette, including its certificate of public convenience and necessity. The certificate held by Marquette authorizes it to engage in the transportation of persons and property by air between Detroit, Mich.; Toledo, Dayton, and Cincinnati, Ohio; and St. Louis, Mo.

The Board on July 3, 1940, had issued an opinion and order in this case denying approval of the acquisition primarily for the reason that "the price provided by the terms of the contract which is before us is excessive."

On November 1, 1940, T. W. A. and Marquette filed petitions setting out certain modifications in the original purchase agreement between the parties. Among other things, this modified agreement provided for a reduction of approximately \$160,000 in the purchase price fixed in the original agreement. The parties petitioned the Board to reconsider its disapproval of the acquisition in the light of the modified agreement. The decision issued today relates to the agreement, as modified.

Three separate opinions were written by members of the Board in connection with the decision. Harlee Branch and Oswald Ryan joined in a single opinion, approving the transaction, while George P. Baker concurred in the decision to approve the transaction but filed a separate opinion. Edward Warner filed a dissenting opinion and Grant Mason did not participate in the decision.

The Board's order of approval rejected several provisions of the agreement, including a provision that T. W. A. pay the sum of \$10,000 to be applied to the reduction of the outstanding liabilities of Marquette and a provision that the book value of certain aircraft sold by Marquette since the making of the purchase agreement should not be deducted from the purchase price. The Board's order also provides as a condition upon the approval that the purchase price and the stock of Marquette be placed in escrow pending a final decision in a separate proceeding now before the Board relating to the validity of Marquette's certificate of public convenience and necessity. The order of the Board states "that the approval of said acquisition shall not be considered as a finding by the Board of the value, for rate making or other purposes, of the capital stock, assets, and business of Marquette to be acquired by T. W. A."

## United Gets Philadelphia Mail Route

The Civil Aeronautics Board has amended the certificate of convenience and necessity of United Air Lines' route No. 1, to include mail service to and from Philadelphia, Pa. Route No. 1 extends between the coterminous points New York, N. Y. and Newark, N. J. and Oakland, Calif., via the intermediate points, Philadelphia, Allentown, Pa., Akron, Cleveland, and Toledo, Ohio, Chicago and Moline, Ill., Iowa City and Des Moines, Iowa, Grand Island and North Platte, Nebr., Denver, Colo., Cheyenne and Rock Springs, Wyo., Salt Lake City, Utah, Elko and Reno, Nev., Sacramento and San Francisco, Calif. Carriage of persons, property and mail previously had been authorized on all parts of this route except for mail to and from Philadelphia.

Since the Postmaster General had certified that improvement of mail service in the Philadelphia area was needed by the inclusion of United Air Lines, the Board took under consideration the other factors involved. Philadelphia is now served by mail schedules of Eastern Air Lines, Inc., Transcontinental and Western Airlines, Inc., American Airlines, Inc., and All American Aviation, Inc. The needed improvement was in East-West service.

The Board stated that it was awarding the amendment to United Air Lines since it was more practical and economical to designate as mail trips flights which are already utilized by the Post Office Department between New York and the Pacific coast, rather than to establish additional schedules over connecting services.

United's present base rate of 17.5 cents per airplane mile was extended to the new service and it was estimated that 100 percent completed trips would total \$10,731 per year additional mail pay to the company.

## Board Announces Mid-Continent Mail Pay

The Civil Aeronautics Board has granted Mid-Continent Airlines, Inc., a base rate of 34 cents per airplane mile for the first 300 pounds of mail or fraction thereof, plus 2.5 percent of such rate per airplane mile for each additional 25 pounds or fraction thereof, on its route No. 48. This Y-shaped route operates between the terminal point Minneapolis-St. Paul, Minn., by way of intermediate stops at Rochester, Minn., Mason City and Des Moines, Iowa, and (a), beyond Des Moines, the terminal point, Kansas City, Mo., and (b) beyond Des Moines, the interme-

diate points Ottumwa, Iowa, and Quincy, Ill., and the terminal point St. Louis, Mo. Since airport limitations at present prevent service to Mason City and Quincy and will do so for at least another year, the Board did not include them in its present consideration.

The Board stated that it felt the airline's estimates of cost on route No. 48 were too high in part and based the awarded rate on an adjustment which found that the total cost to the company would be \$278,737.35, or 58.6 cents per airport-to-airport mile. The company estimated its nonmail revenue at 24.55 cents per airport-to-airport mile. The Board considered that this was too low an estimate of potential traffic based on general increases throughout the country and on the company's use of the new Lodestar transports, which are larger and more comfortable than former equipment. The Board stated that it believed the use of the Lodestars would increase traffic to an extent which would offset the additional cost of operating the new planes, as against the older Electras. Lack of complete data on such operations, however, the Board said, would make it necessary to reexamine the rate set after enough time had been given to establish actual operating costs.

In connection with the proposed equipment change, the opinion stated: "In general, and except where requirements of safety are involved, the opera-

(Continued on page 32)

## STATISTICAL SUMMARY



Domestic air carrier traffic statistics for November 1940 showed comparatively sharp decreases from the high levels of the preceding months, but still were well above the comparable results for November 1939 in most categories, according to figures filed with the Civil Aeronautics Administration.

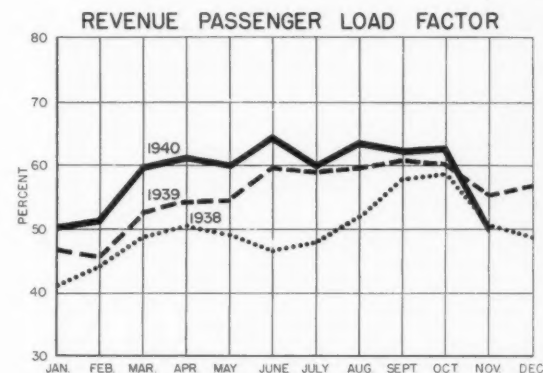
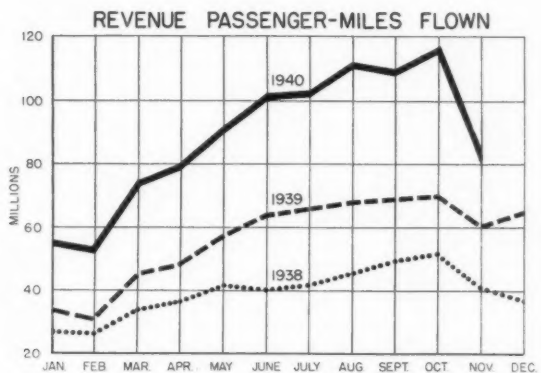
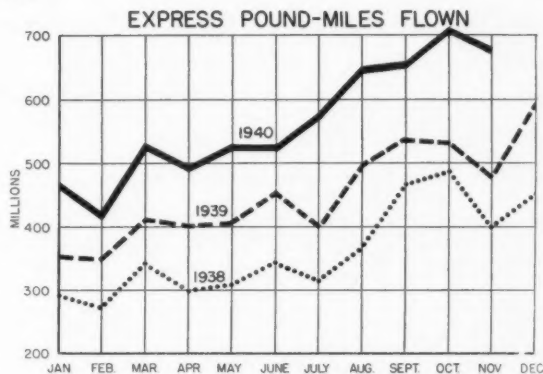
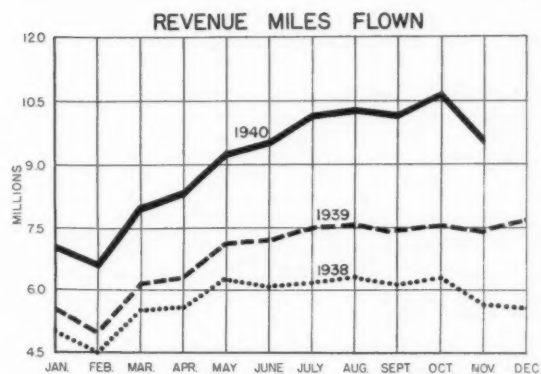
The 16 scheduled domestic carriers in November flew 9,573,378 revenue miles, an increase of 29.23 percent over November 1939, while revenue passengers carriers totaled 219,804, an increase of 39.18 percent over the total for the like 1939 month.

Revenue-passenger miles flown reached 81,375,804 in November, a gain of 34.20 percent over November 1939, and express pound-miles flown were 674,219,640, up 41.58 percent.

The revenue-passenger load factor for November 1940 was 50.09 percent compared with 55.15 percent in November 1939.



# Domestic Air Carrier Traffic Statistics for 1938, 1939, and the First 11 Months of 1940



## Domestic Air Carrier Traffic Statistics for November 1940

Operator	Revenue miles flown		Revenue passengers carried		Revenue passenger-miles flown		Express pound-miles flown		Revenue passenger load factor (percent)	
	November 1940	Percent change over 1939	November 1940	Percent change over 1939	November 1940	Percent change over 1939	November 1940	Percent change over 1939	November 1940	November 1939
American Airlines, Inc.	2,433,474	31.44	74,481	40.45	26,118,692	30.37	195,455,273	45.99	59.14	64.08
Brantiff Airways, Inc.	419,738	39.26	10,155	78.41	3,001,637	64.67	14,793,526	51.82	42.80	62.35
Chicago & Southern Air Lines, Inc.	167,740	6.29	3,710	57.60	1,421,412	55.06	7,639,677	46.95	42.35	58.09
Continental Air Lines, Inc.	106,160	4.34	1,018	29.02	321,626	33.88	788,980	75.48	30.29	33.98
Delta Air Corporation	181,491	20.81	4,387	32.70	1,094,024	36.46	2,585,249	-6.00	50.16	53.37
Eastern Air Lines, Inc.	1,495,279	57.83	34,088	49.84	13,551,854	48.52	78,232,583	32.92	48.25	53.69
Inland Air Lines, Inc.	87,511	2.65	800	2.56	196,693	-5.09	351,153	-23.82	22.48	24.31
Mid-Continent Airlines, Inc.	168,645	63.35	2,113	34.76	546,005	37.44	1,060,589	2.32	25.93	38.90
National Airlines, Inc.	97,308	51.96	1,990	99.40	447,145	108.05	1,117,862	74.57	44.24	33.56
Northeast Airlines, Inc. <sup>1</sup>	68,486	5.30	1,932	23.14	283,528	16.61	520,428	48.90	41.40	37.38
Northwest Airlines, Inc.	474,133	6.21	8,241	7.26	3,203,906	12.54	24,471,249	48.87	33.54	38.61
Pennsylvania-Central Airlines Corporation	343,436	12.61	16,140	49.54	2,881,977	54.86	10,895,783	18.49	42.88	61.02
Transcontinental & Western Air, Inc.	1,353,950	22.40	24,182	26.47	12,136,986	34.69	111,223,704	45.07	52.14	48.40
United Air Lines Transport Corporation	1,951,997	28.03	32,120	33.28	15,073,981	25.81	206,853,857	39.89	51.60	58.14
Western Air Express Corporation	219,271	21.41	3,671	42.78	1,073,058	18.39	17,880,587	43.38	33.91	43.34
Wilmington-Catalina Airlines, Ltd.	4,759	-13.79	776	-6.84	23,280	-6.84	349,140	34.61	53.22	50.24
<b>Total</b>	<b>9,573,378</b>	<b>29.23</b>	<b>219,804</b>	<b>39.18</b>	<b>81,375,804</b>	<b>34.20</b>	<b>674,219,640</b>	<b>41.58</b>	<b>50.09</b>	<b>55.15</b>

<sup>1</sup> Formerly Boston-Maine Airways, Inc.

# Airways and Airports

## Airport Projects Divided Into Three Categories

### Colonel Connolly Makes Public Method Under Which \$40,000,000 Appropriation Will Be Expended; Other Agencies Used

Following his recent announcement of the locations of 200 airport sites which are to be constructed or improved under the \$40,000,000 airport program, Donald H. Connolly, Administrator of Civil Aeronautics, has made public the methods under which the appropriation will be expended.

In order to obtain the greatest possible number of completed and useful airports that the funds would permit, a plan which supplements the C. A. A. program with the work and funds of other Federal agencies has been worked out.

This plan divides the work into three categories, as follows:

1. In cooperation with W. P. A., C. A. A. funds will be augmented by relief labor and with funds relating to that labor, at 88 points where the W. P. A. is already engaged in work projects;
2. By private contract, utilizing personnel of the Army Corps of Engineers for the work of engineering and supervision on 98 of the 200 sites; and
3. By private contract, all engineering work to be done by the Airways Engineering Division of the Civil Aeronautics Administration. This involves 14 sites, seven of which are located in the Territory of Alaska, and the remaining seven at various points within the continental limits of the United States.

All projects, with the exception of those to be completed by the W. P. A. will be contracted for by the Civil Aeronautics Administration and in all contract work, information as to the date and place that bids will be advertised can be obtained from the appropriate C. A. A. regional manager.

The C. A. A. regional managers are: Region 1—John E. Sommers, LaGuardia Airport, New York, N. Y.; Region 2—R. C. Copeland, Post Office Building, Atlanta, Ga.; Region 3—Harold R. Neely, 1204 Post Office Building, Chicago, Ill.; Region 4—L. C. Elliott, P. O. Box 1689, Fort Worth, Tex.; Region 5—Leonard W. Jurden, City Hall Building, Kansas City, Mo.; Region 6—J. S. Marriott, 1508 Fourth Street, Santa Monica, Calif.; and Region 7—R. D.

Bedinger, King County Airport, Seattle, Wash.

The list of airport projects follows (a complete list giving brief descriptions of each project was carried in the Civil Aeronautics Journal, volume 2, No. 1, dated January 1, 1941):

### W. P. A.—C. A. A. Projects

*Alabama*—Foley and Montgomery; *Arkansas*—Little Rock; *California*—Oreville; *Colorado*—Pueblo; *Connecticut*—Bridgeport, *District of Columbia*—Washington; *Florida*—Daytona Beach, Jacksonville, Lake City, Lakeland, Miami, Ocala, Palatka, St. Petersburg, Sarasota-Bradenton, Tallahassee, and West Palm Beach; *Georgia*—Americus, Atlanta, Atlanta (Camp Gordon), Augusta, and Macon; *Idaho*—Burley, Idaho Falls, and Pocatello; *Illinois*—Chicago; *Kentucky*—Lexington; *Louisiana*—New Orleans (Navy).

*Maine*—Bangor, Houlton, Millinocket, Pittsfield, Portland, Presque Isle, and Waterville; *Maryland*—Hagerstown; *Massachusetts*—Hyannis, Lawrence, Westfield, and Worcester; *Mississippi*—Jackson (two projects); *Montana*—Butte and Missoula; *Nebraska*—North Platte; *Nevada*—Elko; *New Hampshire*—Berlin; *New Mexico*—Roswell; *New York*—Buffalo, Massena, Niagara Falls, Rochester, and Utica; *North Carolina*—Asheville and Charlotte; *North Dakota*—Bismarck.

*Oklahoma*—Muskogee; *Oregon*—Astoria, La Grande, and Portland; *Pennsylvania*—Erie, Harrisburg, Johnstown, Reading, Wilkes-Barre, and Williamsport; *South Carolina*—Spartanburg; *Tennessee*—Jackson; *Texas*—Big Spring, Brownwood, College Station, Eagle Pass, and San Antonio; *Utah*—Salt Lake City; *Vermont*—Barre-Montpelier and Burlington; *Virginia*—Lynchburg, Norfolk, and Roanoke; *Washington*—Bellingham, Port Angeles, Spokane, and Yakima; *Wisconsin*—Milwaukee; *Wyoming*—Casper and Sheridan; and *Territory of Hawaii*—John Rodgers Airport, Oahu.

### Private Contracts—Army Supervision

*Alabama*—Dothan and Mobile; *Arizona*—Ajo, Phoenix, Tucson, Valle (Arizona State Airport), Winslow, and Yuma; *California*—Bakersfield, Long Beach, Oxnard, Red Bluff, Santa Barbara, Santa Monica, Willows, and Yuba-Marysville; *Colorado*—La Junta; *Connecticut*—Hartford; *Delaware*—Dover; *Florida*—Fort Myers, Homestead, Melbourne, St. Augustine, Tampa, Vero Beach, and West Palm Beach (two projects); and *Georgia*—Albany and Savannah (two projects).

*Idaho*—Boise; *Indiana*—Fort Wayne; *Kentucky*—Louisville (two projects); *Louisiana*—Baton Rouge, New Orleans (Menefee), and New Orleans (N. O. Apt.); *Maine*—Augusta, Bangor, Bar Harbor, Greenville, and Sanford; *Massachusetts*—Bedford (Boston No. 2); *Michigan*—Battle Creek; *Mississippi*—Meridian; *Montana*—Billings, Bozeman, Great Falls, Lewistown, and Miles City; *Nevada*—Las Vegas; *New Hampshire*—Laconia and West Lebanon; *New Jersey*—Bendix, Bridgeton (Millville), Morristown, and Red Bank; *New Mexico*—Las Vegas and Santa Fe.

## AIR NAVIGATION FACILITIES

### Radio Aids

(As of December 31, 1940)

Ranges	282 (5 in Alaska) (2 in Hawaii)
Range stations simultaneous, with voice	186 (5 in Alaska) (1 in Hawaii)
Range stations non-simultaneous, with voice	81
Range stations, no voice	15 (1 in Hawaii)
Broadcast stations	114 (8 in Alaska) (1 in Hawaii)
Broadcast stations, simultaneous	109 (5 in Alaska) (1 in Hawaii)
Broadcast stations, non-simultaneous	5 (3 in Alaska)
Marker stations	42
Fan markers	107
Voice (only) stations	13 (7 in Alaska)
Z-markers (away from field)	2

*New York*—Endicott, Syracuse, and White Plains; *North Dakota*—Fargo; *Ohio*—Cleveland; *Oklahoma*—Muskogee, Oklahoma City, and Tulsa (two projects); *Oregon*—Baker, Eugene, Klamath Falls, Medford, Pendleton, and The Dalles; *Pennsylvania*—Allentown-Bethlehem; *Rhode Island*—Rhode Island State Airport; *South Carolina*—Charleston, Columbia, and Myrtle Beach; *Tennessee*—Memphis; *Texas*—Austin, Corpus Christi, Galveston, Houston, Sweetwater, and Waco (two projects); *Utah*—Ogden and Salt Lake City.

*Washington*—Kitsap County, Seattle, Walla Walla, and Wenatchee; *Wyoming*—Cheyenne; *Territory of Hawaii*—Hilo, Hawaii, Maui, Molokai, Molokai, and Upolu Point, Hawaii.

### Private Contracts

(C. A. A. Airways Engineering Division)

*California*—Los Angeles; *Kansas*—Garden; *North Dakota*—Grand Forks; *Ohio*—Youngstown; *Oregon*—Salem; *Texas*—Del Rio; *Wyoming*—Rock Springs; *Alaska*—Big Delta, Boundary, Cordova, Juneau, Kotzebue, Nome, and Ruby.

### Recognized Dealer

The Coast and Geodetic Survey has announced the addition of the following to the list of dealers authorized to sell aeronautical charts:

Merrell Aviation Ground School, 2634 Franklin Avenue, Seattle, Wash.

### Airport Projects Approved

In accordance with the provisions of section 303 of the Civil Aeronautics Act, the Administrator of Civil Aeronautics has issued certificates of air navigation facility necessity, authorizing the expenditure of Federal funds in the operation of the following projects:

#### ALABAMA

**Birmingham**—\$255,029 for W. P. A. project, including construction of runway, extension of existing runways, increasing lighting facilities, grading, and draining field, and developing additional acreage at municipal airport.

**Enterprise**—\$20,737 for W. P. A. project, calling for extension of runway, construction of a hangar, seeding, sodding, grading, marking, and performing incidental work at Enterprise Airport.

**Huntsville**—\$48,291 for W. P. A. project, calling for clearing and grubbing, grading, draining, constructing runways, dressing, constructing apron, building fence, placing markers, and performing appurtenant work at municipal airport.

**Winfield**—\$21,528 for W. P. A. project, including extension of landing strips, construction of a hangar, grading, drainage, clearing, sodding, marking, and fencing at Winfield Airport.

#### CALIFORNIA

**Eureka**—\$1,620 for N. Y. A. project, calling for complete construction of two wings to join existing hangar, excavation, concrete footings and floors, carpentry, painting, roofing, glazing, plumbing, and electrical work at Humboldt County Airport.

#### COLORADO

**Denver**—\$82,768 for W. P. A. project, including installation of complete field lighting system and control tower, as well as incidental and appurtenant work. Also in-

cludes concrete work trench excavation and backfill, removal of old administration building control tower and construction of a new tower at municipal airport.

#### CONNECTICUT

**Groton**—\$94,379 for W. P. A. project, including development of 40 acres to enlarge landing area to allow construction of three oiled, gravel runways; installing a new boundary lighting system and removing two high-tension pole lines at Groton Airport (Trumbull).

#### FLORIDA

**Cedar Keys**—\$27,755 for W. P. A. project for enlarging and improving Cedar Keys Airport, including clearing, grubbing, excavating, hand dressing, muck blanket, and incidental work.

**Deland**—\$120,272 for W. P. A. project, calling for clearing, grubbing, grading, construction of two paved runways; paving of entrance drive; and performing incidental work at municipal airport.

**Jacksonville**—\$573,473 for W. P. A. project, including clearing, grubbing, grading, mucking, springing, reconstructing runways, and performing incidental work at municipal airport.

**West Palm Beach**—\$420,110 for W. P. A. project, including construction of concrete turning circles and apron; extension and widening of existing runways; taxi strips, apron, service road, and parking area; installation of drainage facilities, runway lighting system, wire fence enclosure, and other incidental work at Palm Beach County Airport.

#### GEORGIA

**Chamblee**—\$406,805 for W. P. A. project, including construction of two identical hangars and performing all necessary and appurtenant work at De Kalb County Airport.

#### LOUISIANA

**Lake Charles**—\$78,252 for W. P. A. project, including excavating and grading, spreading sand-clay-gravel on runways and taxi strips; installing concrete drainage pipe, seeding and sodding unsurfaced part of runways; and other incidental work at Lake Charles Airport.

**Shreveport**—\$277,115 for W. P. A. project, consisting of construction of three paved runways, surfacing runways with asphalt, construction of concrete taxiways and

(Continued on next page)

### Status of Landing Facilities by States on January 1, 1941

#### Airports and landing fields, seaplane bases and anchorages

	Municipal	Commercial	Intermediate	Auxiliary	Navy	Army	Private	Miscellaneous, Government (U. S. Forest Service and Coast Guard)	Total	Partially or fully lighted	Base	Anchorage	Navy	U. S. Coast Guard	U. S. Marine Corps	Army	Total	Lights
Alabama	11	2	6	8	0	3	4	34	13	1		1					1	
Alaska	1	8	0	118	0	0	2	129	2								9	
Arizona	9	7	11	16	0	1	0	44	17			0					0	
Arkansas	10	3	4	5	0	0	3	25	8			1					1	
California	49	49	17	26	4	6	20	3	174	63	3		2	1			6	
Colorado	28	2	3	0	0	1	2	0	36	9							0	
Connecticut	8	5	1	3	0	0	0	0	17	8		9	0				12	
Delaware	1	4	0	0	0	1	1	0	7	3							0	
District of Columbia	0	1	0	0	1	1	0	0	3	3		1	1				2	1
Florida	44	11	7	52	3	3	2	0	122	35	9	24	2	2			37	2
Georgia	22	6	11	14	0	2	0	0	55	22	2						7	1
Idaho	16	0	7	13	0	0	3	7	46	12							2	
Illinois	15	33	6	2	0	3	7	0	66	28		2					2	
Indiana	14	21	6	5	0	2	3	0	51	18		1					1	
Iowa	20	9	3	0	0	0	2	0	34	11							0	
Kansas	22	7	4	0	0	2	1	0	36	14							0	
Kentucky	6	1	3	5	0	1	3	0	19	4	1						1	
Louisiana	14	2	4	2	0	1	3	0	26	12	1	8					9	
Maine	13	3	0	2	0	0	0	0	18	5	3	18					21	
Maryland	2	12	1	1	0	2	2	0	20	10	2	1	1				4	1
Massachusetts	6	26	1	4	1	1	1	0	40	12	1	34	1	1			37	
Michigan	61	10	0	28	1	3	10	3	116	21		27	1	1		1	29	
Minnesota	16	5	3	2	0	1	1	0	28	12	2	4					6	
Mississippi	16	1	7	7	0	0	1	0	32	15		2		1			3	1
Missouri	12	7	12	0	1	1	4	0	37	19							0	
Montana	20	1	15	24	0	0	2	8	70	22		1					1	
Nebraska	31	1	5	0	0	3	3	0	43	16							0	
Nevada	2	3	8	8	0	0	0	0	21	12		1					1	
New Hampshire	8	3	0	1	0	0	0	0	12	4	1	5					6	
New Jersey	5	13	0	1	2	1	3	1	28	7	3	1	1				5	2
New Mexico	8	6	13	7	0	0	3	0	37	18							0	
New York	25	39	6	4	0	5	13	0	92	30	8	39		1		1	49	2
North Carolina	16	11	2	2	0	1	1	1	34	11		6					6	
North Dakota	8	4	9	13	0	0	0	0	34	11							9	
Ohio	27	41	11	13	0	3	9	1	105	27		9					0	1
Oklahoma	18	5	7	8	0	1	2	0	41	20							3	
Oregon	12	3	6	7	0	0	2	0	30	14	2		1				9	1
Pennsylvania	31	36	6	8	1	1	4	0	107	35	3	5	1				3	
Rhode Island	1	3	0	1	0	0	0	0	5	1		2	1				3	
South Carolina	12	2	4	7	2	0	2	0	29	9	0	4		1			5	1
South Dakota	15	2	1	3	0	0	1	0	22	4							0	
Tennessee	8	1	8	4	0	0	0	0	21	13							0	
Texas	45	16	31	38	0	10	6	0	146	56	2	9					11	1
Utah	2	1	11	7	0	0	0	0	21	15							0	
Vermont	14	3	0	1	0	1	0	0	11	1		3					3	
Virginia	17	15	7	4	4	2	3	0	49	17		1	2		1	1	5	
Washington	17	4	6	15	1	4	1	3	51	17	3	3					9	
West Virginia	11	7	2	5	0	1	1	0	27	7	2						2	
Wisconsin	18	18	3	6	0	1	1	0	47	18	3	12					15	
Wyoming	12	1	11	7	0	0	2	0	33	16							0	
<b>Total</b>	<b>788</b>	<b>496</b>	<b>289</b>	<b>507</b>	<b>21</b>	<b>69</b>	<b>134</b>	<b>27</b>	<b>2,331</b>	<b>776</b>	<b>53</b>	<b>243</b>	<b>16</b>	<b>9</b>	<b>1</b>	<b>3</b>	<b>325</b>	<b>15</b>

## AIRPORT PROJECTS

(Continued from preceding page)

aprons; installation of proper drainage facilities; minor changes in existing boundary lights; clearing approach zones, sodding and sprigging, and other related items of work at municipal airport.

### MAINE

**Sanford**—\$358,036 for W. P. A. project, calling for construction and surfacing of three runways; grading, draining, and clay stabilization of safety bands at Sanford Airport.

**Waterville**—\$194,075 for W. P. A. project, calling for extension of runways "A," "B," "C," and construction of new road to airport; drainage and completion of all safety strips at municipal airport.

### MARYLAND

**Baltimore**—\$26,073 for W. P. A. project, consisting of grading, installation of drains, extension of lighting system, surfacing runways, carpentry, painting hangars, and performing appurtenant work at Logan Field Station, Baltimore Municipal Airport.

### MASSACHUSETTS

**Barnstable**—\$116,397 for W. P. A. project, including construction of one runway with hard surface. The work also includes cuts and fills, clearing, grubbing, drainage, catch basins, hard surfacing, finish grading, seeding, and incidental work at Hyannis Municipal Airport.

**Beverly**—\$168,866 for W. P. A. project, including construction of one runway with hardened surface. Work also includes excavation, clearing drainage, catch basins, and appurtenant work at Beverly Airport.

**Fitchburg**—\$121,270 for W. P. A. project, including clearing, grubbing, drainage, catch basins, dike, moving buildings to new locations, grading hard surface runway, and appurtenant work at Fitchburg and Leominster Airports.

**Lawrence**—\$120,531 for W. P. A. project, calling for widening present runway, clearing, grubbing, graveling, finished grading, drainage, hardened-surfaced construction, and incidental work at municipal airport.

### MICHIGAN

**Detroit**—\$268,739 for W. P. A. project, consisting of excavation, installation of storm sewer, construction of manhole, catch basins, drainage trenches, and runways at Wayne County Airport.

### MONTANA

**Helena**—\$93,548 for W. P. A. project, including laying pipe, construction of French drains, concrete turnarounds and ramps; oil surfacing runways; improving lighting system; and appurtenant work at municipal airport.

### NORTH CAROLINA

**Charlotte**—\$259,522 for W. P. A. project, consisting of lengthening two runways, lighting and paving all runways, constructing driveways on airport property, and performing incidental work, including operation of a stone quarry and gravel pit at municipal airport.

**Friendship**—\$253,505 for W. P. A. project, including grading and draining existing road along western side of airport, extension of E/W runway; excavating; installing drains, catch basins and manholes; and performing additional work at Greensboro-High Point Airport.

### NORTH DAKOTA

**Minot**—\$69,819 for W. P. A. project, including grading and leveling of runways; installing lighting and markers; fencing; constructing aprons, and performing incidental and appurtenant work at municipal airport.

### NEW MEXICO

**Carlsbad**—\$48,232 for W. P. A. project, work consisting of producing construction materials, clearing and grubbing, grading, and other items of work at municipal airport.

## SOUTH CAROLINA

**Charleston**—\$25,134 for W. P. A. project, including construction of paved runway with necessary excavation, grading, draining, and surfacing, installing additional boundary lights, and performing incidental work at municipal airport.

## TENNESSEE

**Jackson**—\$66,501 for W. P. A. project, including placing drain tile, drilling water well, field lighting system with beacon, hangar of structural steel with plumbing and electrical wiring at municipal airport.

## TEXAS

**Big Spring**—\$13,500 for N. Y. A. project, consisting of excavation, masonry, framing, composition-board ceiling, insulation, glazing, furring and lathing, plastering, cement filling, plumbing, and electrical work at municipal airport.

## UTAH

**Salt Lake City**—\$22,530 for W. P. A. project, including laying culvert pipe in open-ditch channel, constructing road with necessary drainage facilities, excavating, filling, oiling, surfacing, and appurtenant work at municipal airport.

## VERMONT

**Barre and Montpelier**—\$2,297 for W. P. A. project for remodeling, renovating, and repairing farmhouse, owned by Airport Commission, into an administration building. Also excavation and backfill, stone masonry, roofing, ditching and tile, installation of one septic tank painting, electrical plumbing, and heating at municipal airport.

## VIRGINIA

**Blacksburg**—\$219,437 for W. P. A. project, including extension of E/W runway, stabilization on side of runway; trenching, construction of parking space, macadam taxi strips, fences where necessary and other appurtenant work at V. P. I. Airport.

**Farmville**—\$22,405 for N. Y. A. project, calling for construction of shop and N. Y. A. living quarters; repair and improvement of old hangar and shop, construction and painting of metal marker cones for State airports, grading and extension of runways, repair and construction of school furniture, and appurtenant work at Municipal Airport.

## WISCONSIN

**Town of Lake**—\$234,699 for W. P. A. project, including construction of fireproof armory and airplane hangar building, including hangar room, garage, machine shop, storerooms, parachute, photographic, and radio supply rooms, offices, mess hall, dining room and kitchen, electrical and plumbing facilities at Milwaukee County Airport.

## Mid-Continent Mail Pay

(Continued from page 28)

tion on domestic air routes of equipment larger than the actual volume of traffic appears to require for its accommodation can only be justified by the anticipation that the larger and more attractive equipment will be responsible for an increase of gross revenues at least equal to the gross increase in cost occasioned by the substitution of the larger equipment for the smaller. Increase in the size of equipment ought to improve the economic position of the operation, rather than to make it worse. It ought not to increase the net burden on the Government for the provision of a given amount of service."

## New Edition Of Practical Air Navigation Now Available

The new edition of the popular "Practical Air Navigation" is just off the press. It may be ordered from the Superintendent of Documents, Government Printing Office. The price is \$1 per copy.

The 254 pages of large type are profusely illustrated, including 12 colored lithographs and as many halftone pictures. Printed for use as a textbook in the controlled ground school course of the Civilian Pilot Training Program of the Civil Aeronautics Administration, the pages have been trimmed to a convenient 8- by 10¼-inch size, with generous margins for notations by students. The 11 chapters in the book are:

The Problems of Air Navigation.

The Earth: Its Form, Coordinates, and Representation.

Instruments.

Chart Reading.

Cross-Country Flying—Piloting.

Air Navigation by Dead Reckoning.

Radio Navigation.

Air Navigation Computer, Graph, and Tables.

The Practice of Navigation.

Celestial Navigation.

Appendix.

Technical and semitechnical terms, at times not formally defined in the main text, are contained in a fairly complete glossary in the appendix. A complete index adds further value as a reference text.

"Practical Air Navigation" enables pilots to make efficient use of the special aeronautical charts provided for them by the United States Coast and Geodetic Survey. These charts are a rather definite index of the tremendous growth, perhaps little appreciated by the average citizen, of our country's aviation industry. Although 80,860 charts were put into the hands of users during July-October of 1939, 268,534 were distributed during the same months of 1949, an increase of 332 percent. It might be interesting to add that 103,655 were used in September alone.

Revised again by the original author, Thoburn C. Lyon, cartographic engineer of the United States Coast and Geodetic Survey, this edition of Practical Air Navigation supersedes Special Publication No. 197. It is in effect a fourth edition of that publication, although now issued as Civil Aeronautics Bulletin No. 24.

All the previous editions have enjoyed a wide circulation, over 100,000 copies of the third edition alone having been issued within the last year.

CIVIL AERONAUTICS JOURNAL



# CIVIL AERONAUTICS BOARD

## OFFICIAL ACTIONS



### Abstracts of Opinions, Orders, and Regulations

FOR THE PERIOD DECEMBER 15-31, 1940

#### ORDERS

ORDER No. 766: *Pan American granted permission to intervene in application of American Export.*

The Board on December 17 granted Pan American Airways, Inc., permission to intervene in the application of American Export Airlines, Inc., for approval of the acquisition of all, or substantially all, of the issued and outstanding stock of T. A. C. A., S. A.

ORDER No. 767: *Private pilot certificate of William Borders suspended for 60 days.*

The Board on December 17 suspended, for a period of 60 days, private pilot certificate No. 30310, held by William S. Borders, Brownwood, Tex., for starting the engine of an aircraft without any operator in said aircraft attending the engine controls and without blocks having been placed in front of the wheels of said aircraft, in violation of the Civil Air Regulations.

ORDER No. 768: *Amended certificate of convenience and necessity of United Air Lines for Route No. 1.*

The Board on December 17, suspended, the certificate of public convenience and necessity of United Air Lines Transport Corp. for Route No. 1, so as to authorize air transportation of mail, in addition to persons and property, to and from Philadelphia, Pa. (Order accompanied by opinion—Docket 323).

ORDER No. 769: *Approved acquisition by TWA of all outstanding stock, assets and business of Marquette.*

The Board on December 18 approved the acquisition by Transcontinental & Western Air, Inc., of all of the outstand-

ing stock and of the assets and business of Marquette Airlines, Inc., including Marquette's certificate of public convenience and necessity, subject to certain conditions. (Order accompanied by opinion—Docket 315.)

ORDER No. 770: *Approved certain interlocking relationships.*

The Board on December 18 approved interlocking relationships of John Elliot Slater, H. M. Gillespie, Charles J. Kinney, Samuel Grudin, Thomas Hitchcock, Jr., Joseph A. Thomas, Charles U. Bay and American Export Airlines, Inc., and American Export Lines, Inc.

ORDER No. 771: *Instituted proceeding to determine whether certificate of convenience and necessity issued to All American should be amended.*

The Board on December 17 suspended, proceeding to determine whether the public convenience and necessity require the certificate of public convenience and necessity issued to All American Aviation, Inc., should be amended to authorize such air transportation of property and mail by All American Aviation to and from Athens, Ohio, as an intermediate point on Route No. 49, and consolidated such proceeding with application of All American Aviation, Inc.

ORDER No. 772: *TWA granted permission to intervene in application of Mayflower.*

The Board on December 20 granted Transcontinental & Western Air, Inc., permission to intervene in the application of Mayflower Airlines, Inc., for a certificate of public convenience and necessity authorizing air transportation between Boston, Mass., and Springfield, Mass.

ORDER No. 773: *American Airlines granted permission to intervene in application of Mayflower.*

The Board on December 20 granted American Airlines, Inc., permission to intervene in the application of Mayflower Airlines, Inc., for a certificate of public convenience and necessity.

ORDER No. 774: *Authorized Eastern to continue suspension of service at Spartanburg, S. C., until June 30, 1941.*

The Board on December 20 amended its order (Serial No. 706) authorizing Eastern Air Lines, Inc., to suspend temporarily service at Spartanburg, S. C., to authorize said air carrier to continue said suspension of service to June 30, 1941.

ORDER No. 775: *Authorized Chicago and Southern to continue suspension of service at Springfield, Ill., until further order of the Board.*

The Board on December 20 amended its order (Serial No. 702) authorizing Chicago and Southern Air Lines to suspend temporarily service at Springfield, Ill., for a 60-day period by extending such period of temporary suspension until further order of the Board.

ORDER No. 776: *Approved interlocking relationships of Ernest Greene and Pan American.*

The Board on December 20 approved interlocking relationships of Ernest W. Greene and Pan American Airways Corp. and subsidiaries.

ORDER No. 777: *Withheld from public disclosure certain portions of testimony in American Export Airlines proceeding.*

The Board on December 20 withheld from public disclosure certain portions of the testimony in the American Export Airlines proceeding.

ORDER No. 778: *Directed certification and filing in U. S. Circuit Court of Appeals transcript of record in American Export Airlines proceeding.*

The Board on December 20 directed certification and filing in the United States Circuit Court of Appeals for the Second Circuit all of the transcript of record in the American Export Airlines proceeding before the Board except that portion of said record being withheld from public disclosure pursuant to Order No. 777.

ORDER No. 779: *B. A. Landstrom directed to show cause.*

The Board on December 20 directed B. A. Landstrom, San Antonio, Tex., to appear before an examiner of the Board and show cause why his aircraft and aircraft engine mechanic certificate No. 12739 should not be revoked in whole or in part, or suspended, in whole or in part, for certifying an aircraft was airworthy when it was not.

ORDER No. 780: *Clyde Primo directed to show cause.*

The Board on December 20 directed Clyde Russell Primo, Cape Girardeau, Mo., to appear before an examiner of the Board and show cause why his private pilot certificate No. 65889 should not be revoked, in whole or in part, or suspended, in whole or in part, for giving flying instruction for hire although not possessed of an instructor rating, and other violations of the Civil Air Regulations.

ORDER No. 781: *TWA granted permission to intervene in application of G & G Airlines Co.*

The Board on December 27 granted Transcontinental & Western Air, Inc., permission to intervene in the matter of the application of G & G Airlines Co., Ltd., for a certificate of public convenience and necessity authorizing air transportation between Phoenix, Ariz., and Boulder City, Nev., via Prescott, Williams, Grand Canyon and Pierce Ferry, Ariz.

ORDER No. 782: *Consolidated applications of United Air Lines and TWA into one proceeding for hearing.*

The Board on December 27 consolidated into one proceeding for purpose of hearing, the application of United Air Lines Transport Corporation for a certificate of public convenience and necessity authorizing air transportation between Boston, Mass., and Cleveland, Ohio, via Hartford, Conn., and the application of TWA for a certificate of public convenience and necessity authorizing air transportation between Pittsburgh, Pa., and Boston, Mass., via Williamsport, Pa., Binghamton, N. Y., and Springfield, Mass.

## Notice

The CIVIL AERONAUTICS JOURNAL carries in this section an abstract of all orders, economic regulations, and rules, and a syllabus of all opinions issued by the Civil Aeronautics Board during the half month ending 2 weeks prior to the date of publication.

### ECONOMIC OPINIONS

All opinions of the Board in economic proceedings are printed individually. They may be obtained on a subscription basis. These are "advance sheets" of the material which later will make up bound volumes of CIVIL AERONAUTICS BOARD REPORTS.

The subscription price for each volume of advance sheets of opinions is \$1. Remittance should be made to the Superintendent of Documents, Government Printing Office, Washington, D. C. Such subscriptions are governed by the quantity of pages rather than by specific periods of time. Current subscriptions include all opinions issued since June 30, 1940, and will continue until the consecutive pagination reaches approximately 800.

NOTE.—Advance sheets of economic opinions also may be purchased individually. As each opinion becomes available in printed forms, the title of the case, docket number, order number, date, and price will be listed here. All orders must be sent to the Superintendent of Documents.

Opinions in cases of suspension, revocation, or denial of airman certificates are available in mimeograph form only. Verbatim copies of these may be obtained by addressing a request for each individual order and opinion desired to the Publications and Statistics Division, Civil Aeronautics Administration, Washington, D. C.

### AMENDMENTS TO REGULATIONS

The full text of all amendments to the Civil Air Regulations, except for exceedingly long ones which may be abstracted, also is carried in this section.

On the back cover of each issue appears a table showing the status of the Civil Air Regulations and the effective amendments thereto. Full instruction for obtaining parts and amendments accompany the table.

ORDER No. 783: *Consolidated applications of Pacific Coast Airlines and Western Air Express into one proceeding for hearing.*

The Board on December 27 consolidated into one proceeding for purpose of hearing the application of Pacific Coast Airlines, Inc., for a certificate of public convenience and necessity authorizing air transportation between Sacramento and Los Angeles, Calif., and the application of Western Air Express Corporation for a certificate of public convenience and necessity authorizing air transportation between Sacramento and Los Angeles, Calif.

ORDER No. 784: *Consolidated applications of TWA and Western Air Express Corporation into one proceeding for hearing.*

The Board on December 27 consolidated into one proceeding for purpose of hearing the applications of TWA and Western Air Express Corporation for certificates of public convenience and necessity authorizing air transportation between Los Angeles, Calif., and San Francisco, Calif., and the application of TWA for an amendment of its existing certificate authorizing air transportation between Winslow, Ariz., and San Francisco, Calif.

ORDER No. 785: *Consolidated applications of E. W. Wiggins Airways and Mayflower Airlines into one proceeding for hearing.*

The Board on December 27 consolidated into one proceeding for purpose of hearing the application of E. W. Wiggins Airways, Inc., for a certificate of public convenience and necessity authorizing air transportation between Providence, R. I., and Nantucket, Mass., with the application of Mayflower Airlines, Inc., for a certificate of public convenience and necessity authorizing air transportation between Nantucket, Mass., and Providence, R. I., and the application of Mayflower Airlines, Inc., for a certificate of public convenience and necessity authorizing air transportation between Boston, Mass., and Springfield, Mass.

ORDER No. 786: *Approved Contract C. A. B. No. 89 filed by Northwest Airlines.*

The Board on December 27 approved Contract C. A. B. No. 89, being an agreement entered into by and between Northwest Airlines, Inc., and Trans-Canada Air Lines on July 17, 1939, providing for the joint use of certain facilities and for the performance of certain services at Winnipeg, Canada, and Seattle, Wash.

ORDER No. 787: *Reopened UAL rate proceeding.*

The Board on December 27 reopened rate proceeding of United Air Lines

Transport Corporation for the purpose of receiving further evidence respecting the schedules on Route No. 12 and revising the rate applicable to said route.

**ORDER No. 788:** *UAL granted permission to inaugurate service at Tacoma, Wash.*

The Board on December 27 granted United Air Lines Transport Corporation permission to inaugurate service at Tacoma, Wash., through the use of McChord Field, on January 1, 1941.

**ORDER No. 789:** *Reopened hearing in the matter of Raymond Lee Kidd.*

The Board on December 30 reopened the hearing in the matter of Raymond Lee Kidd, holder of private pilot certificate No. 4357, for the purpose of taking the testimony of Charles Tusa.

**ORDER No. 790:** *Enlarges Eastern Mail rate investigation.*

The Board on December 31 enlarged its investigation into the matter of compensation for the transportation of mail by Eastern Air Lines, so as to include a determination with respect to route No. 40, as amended, and the new route No. 47.

**ORDER No. 791:** *Denies United temporary exemption from Section 238.3 of Economic Regulations.*

The Board on December 31 denied the petition of United Air Lines Transport Corporation for temporary exemption from the provisions of section 238.3 of the Economic Regulations.

**ORDER No. 792:** *Approved interlocking relationship of Graham Bethune Grosvenor.*

The Board on December 31 approved the interlocking relationships existing or proposed to exist between Graham Bethune Grosvenor and Pan American Airways Co. (Delaware) et al.

**ORDER No. 793:** *Approved interlocking relationship of Edward Orrick McDonnell.*

The Board on December 31 approved the interlocking relationships existing or proposed to exist between Edward Orrick McDonnell and Pan American Airways Co. (Delaware) et al.

**ORDER No. 794:** *Approved interlocking relationship of Robert Lehman.*

The Board on December 31 approved the interlocking relationships existing or proposed to exist between Robert Lehman and Pan American Airways Co. (Delaware) et al.

**ORDER No. 795:** *Dismissed application of Frederick Brant Rentschler for approval of interlocking relationship.*

The Board on December 31 dismissed the application for approval of interlocking relationships between Frederick Brant Rentschler and Pan American Airways, Inc., et al.

**ORDER No. 796:** *Re applications of Western Air and Inland Air Lines for certificates of convenience and necessity.*

The Board on December 5 issued Western Air Express Corporation a certificate of public convenience and necessity authorizing the carrier to engage in air transportation with respect to persons, property, and mail between Great Falls, Mont., and Lethbridge, Canada, via Cut Bank-Shelby, Mont., said certificate to be effective December 31, 1940, date of approval by the President. Denied application of Western Air Express Corporation in all other respects and also denied the application of Inland Air Lines, Inc., for a certificate of public convenience and necessity. (Opinion and order—Dockets 31-401-B-1 and 257.)

## REGULATIONS

**REGULATION No. 132:** *The Board on December 20 adopted Amendment No. 87 of the Civil Air Regulations, entitled "Revocation of airmen and air agency certificates." The amendment, inserting new sections in parts 20, 21, 24, 26, 27, 50, 51, 52, and 53 of the C. A. R., follows:*

Effective December 20, 1940, the Civil Air Regulations are amended as follows:

1. By inserting a new section in part 20 to read as follows:

"20.311. *Revocation.*—No person whose pilot certificate has been revoked shall apply for or be issued a pilot certificate of any grade or rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

2. By inserting a new section in part 21 to read as follows:

"21.211. *Revocation.*—No person whose airline transport pilot certificate has been revoked shall apply for or be issued a pilot certificate of any grade or rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

3. By inserting a new section in part 24 to read as follows:

"24.38. *Revocation.*—No person whose mechanic certificate has been revoked shall apply for or be issued a mechanic certificate of any rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

4. By inserting a new section in part 26 to read as follows:

"26.44. *Revocation.*—No person whose air-traffic control-tower operator certificate has been revoked shall apply for or be issued an air-traffic control-tower operator certificate of any rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

5. By inserting a new section in part 27 to read as follows:

"27.38. *Revocation.*—No person whose aircraft dispatcher certificate has been revoked shall apply for or be issued an aircraft dispatcher certificate for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

6. By inserting a new section in part 50 to read as follows:

"50.15. *Revocation.*—No person whose flying school certificate has been revoked shall apply for or be issued a flying school certificate of any rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

7. By inserting a new section in part 51 to read as follows:

"51.28. *Revocation.*—No person whose ground instructor certificate has been revoked shall apply for or be issued a ground instructor certificate of any rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

8. By inserting a new section in part 52 to read as follows:

"52.37. *Revocation.*—No person whose repair station certificate has been revoked shall apply for or be issued a repair station certificate of any rating for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

9. By inserting a new section in part 53 to read as follows:

"53.36. *Revocation.*—No person whose mechanic school certificate has been revoked shall apply for or be issued a mechanic school certificate for a period of 1 year after the revocation, except as the order of revocation may otherwise provide."

**REGULATION No. 133:** *The Board on December 27 adopted Amendment No. 88 of the Civil Air Regulations, entitled "Special Issuance of Pilot Certificates." The full text of the amendment, which makes changes in one section of Part 20 of the C. A. R., is as follows:*

Effective December 27, 1940, section 20.35 of the Civil Air Regulations is amended to read as follows:

"(a) The holder of a pilot certificate of private grade or higher, which has expired because of failure to secure the necessary flight time, may, upon application to any inspector, have the expired certificate endorsed as conveying the privileges of a student-pilot certificate until 1 year from the date of original expiration. After such endorsement, the holder may exercise all the privileges incident to a student-pilot certificate which has been endorsed to permit solo cross-country flight, and may operate aircraft of the type, weight, and engine classifications specified in the rating record attached to his expired certificate."

"(b) The holder of an expired pilot certificate of private grade or higher, if application is made within the year following its expiration, may secure a new private pilot certificate with the type, weight, and engine ratings previously held by showing that, as of the date of application, he has met the requirements (as set forth in sec. 20.34 (c)) for periodic endorsement of a private pilot certificate with such ratings."

"(c) The holder of an expired limited-commercial or commercial pilot certificate may secure a new certificate of the same grade, and with the ratings previously held—

"(1) If application is made within 90 days after the expiration of his certificate, by showing that, as of the date of application, he has met the requirements (as set forth in sec. 20.34 (d) or (e)) for periodic endorsement of the certificate with such ratings;

"(2) If the application is made within 1 year after the expiration of his certificate, by meeting the requirements specified in paragraph (1) and, in addition, passing the flight test prescribed for such a certificate and ratings."

"Provided, however, that no new limited commercial pilot certificate issued under this subsection shall be or remain effective beyond May 1, 1942."

"(d) No endorsement shall be made under subsection (a) of this section and no new certificate shall be issued under subsections (b) or (c) of this section if the pilot certificate expired while it was the subject of a revocation or suspension proceeding or expired because of the refusal of an inspector to endorse."

# Status of Parts of the Civil Air Regulations and Amendments

As of January 15, 1941

All persons affected by the Civil Air Regulations, including those preparing for examination for certificates, may obtain the parts required from the Publications and Statistics Division, Civil Aeronautics Administration, Washington, D. C., without charge.

## ONLY PARTS ACTUALLY NEEDED SHOULD BE REQUESTED

For example, *pilots* are governed in general by parts 01, 20, and 60; *aircraft mechanics* by parts 01, 04, 15, 18, 24, and section 60.32; and *aircraft engine mechanics* by parts 01, 04, 13, 14, 18, and 24.

## HOW TO ORDER PARTS

Those persons not affected by the C. A. R., but desiring all or any part of the Regulations for other

purposes, may obtain them in the manner herein described. Those parts on which a price is listed in the tabulation below are on sale by the Superintendent of Documents, United States Government Printing Office, Washington, D. C., and are not available for free general distribution.

Eventually, all parts will be placed on sale; meanwhile, parts not yet on sale (carrying remark, in tabulation below, "order from C. A. A. only") may be obtained without charge from the C. A. A., upon demonstration of valid interest on the applicant's part.

Bound volumes of the complete Civil Air Regulations are no longer available.

AERONAUTICS JOURNAL, as released. (Occasional amendments, too long to print in full, are abstracted to describe fully the nature and purpose of the amendment's provisions so that the individual may determine whether he need order the full text.)

The tabulation below carries in the right-hand column the numbers of all effective amendments to each part issued subsequent to the date of that part. When ordering parts from the C. A. A., all effective amendments are automatically included. But, after ordering parts from the Superintendent of Documents, the amendments received should be checked against this tabulation and those not received ordered from the C. A. A.

## IMPORTANT: AMENDMENTS

All amendments to the Civil Air Regulations are printed in the Official Actions section of the CIVIL

NOTE.—Part numbers not included in the list below are unassigned.

Part No.	Title	Date	Remarks	Price	Amendments Issued
<b>AIRCRAFT</b>					
00.	CANCELLED		Now incorporated in Part 01.		
01.	AIRCRAFT REGISTRATION AND AIRWORTHINESS CERTIFICATES.	July 15, 1940	In stock at C. A. A. and on sale at G. P. O.	\$0.05	Administrative amendment No. 1, 68, 75.
02.	TYPE AND PRODUCTION CERTIFICATES.	do.	do.	.05	75.
03.	CANCELLED		Now incorporated in Part 01.		
04.	AIRPLANE AIRWORTHINESS <sup>1</sup>	May 31, 1938	Out of stock; reprint, including amendments, to be available soon from C. A. A.		60 (a), 5, 14, 26, 28, 48, 56, 69, 75, 85.
13.	AIRCRAFT ENGINE AIRWORTHINESS <sup>2</sup>	Nov. 15, 1940	In stock; order from C. A. A. only		
14.	AIRCRAFT PROPELLER AIRWORTHINESS <sup>3</sup>	do.	do.		
15.	AIRCRAFT EQUIPMENT AIRWORTHINESS <sup>3</sup>	do.	do.		
16.	AIRCRAFT RADIO EQUIPMENT AIRWORTHINESS	Effective Feb. 13, 1941	do.		
18.	REPAIR AND ALTERATION OF AIRCRAFT <sup>3</sup>	do.	Out of stock.		
<b>AIRMEN</b>					
20.	PILOT CERTIFICATES	May 1, 1940	In stock at C. A. A. and on sale at G. P. O.	\$0.05	54, 63, 65, 67, 75, 82, 83, 87.
21.	AIRLINE TRANSPORT PILOT RATING.	Nov. 15, 1940	In stock; order from C. A. A. only		87.
23.	CANCELLED		Now incorporated in Part 51.		
24.	MECHANIC CERTIFICATES.	May 1, 1940	Out of stock at C. A. A., but on sale at G. P. O.	.05	44, 61, 73, 75, 87.
25.	CANCELLED		Now incorporated in Part 24.		
26.	AIR-TRAFFIC CONTROL-TOWER OPERATOR CERTIFICATES.	Oct. 4, 1940	In stock at C. A. A. and on sale at G. P. O.	.05	87.
27.	AIRCRAFT DISPATCHER CERTIFICATES.	July 15, 1940	do.	.05	74, 75, 87.
<b>AIR CARRIERS</b>					
40.	AIR CARRIER OPERATING CERTIFICATION (INTERSTATE).	May 31, 1938	In stock at C. A. A. and on sale at G. P. O.	\$0.05	85.
<b>AIR AGENCIES</b>					
50.	FLYING SCHOOL RATING <sup>3</sup>	Nov. 1, 1940	In stock at C. A. A. and on sale at G. P. O.	\$0.05	87.
51.	GROUND INSTRUCTOR RATING.	May 1, 1940	Out of stock at C. A. A., but on sale at G. P. O.	.05	75, 87.
52.	REPAIR STATION RATING <sup>1</sup>	do.	do.	.05	75, 84, 87.
53.	MECHANIC SCHOOL RATING <sup>3</sup>	Sept. 15, 1940	In stock at C. A. A. and on sale at G. P. O.	.05	75, 87.
<b>AIR NAVIGATION</b>					
60.	AIR TRAFFIC RULES <sup>4</sup>	Oct. 4, 1940	In stock at C. A. A. and on sale at G. P. O.	\$0.10	76, 77, 80, 86.
61.	SCHEDULED AIR CARRIER RULES (INTERSTATE).	May 31, 1938	Out of stock; to be available soon at C. A. A. and on sale at G. P. O.		601-A-1, 51, 52, 75.
<b>MISCELLANEOUS<sup>5</sup></b>					
98.	DEFINITIONS	Nov. 15, 1940	In stock; order from C. A. A. only		
99.	MODE OF CITATION OF REGULATIONS.	do.	do.		

<sup>1</sup> Manual out of stock.

<sup>2</sup> Manual not yet issued.

<sup>3</sup> Manual for this part available; order from C. A. A. only.

<sup>4</sup> Part 2 of Manual, Airport Traffic Control, and Part 3, Airway Traffic Control, available; order from C. A. A. only.

<sup>5</sup> Parts 90.-96., inclusive, have been cancelled.



